# NEWSLETTER

Of The
Arboretum of The Barnes Foundation

MERION, PENNSYLVANIA 19066
NUMBER 20: MARCH 1978

# A VISIT TO EGYPT AND GREECE

**JOHN M. FOGG, JR.**

Although no regular mid-winter Arboretum tour was scheduled for 1977-78, a small group of us participated in a visit to Egypt and Greece, including Crete.

Departing from Philadelphia on Friday, December 16, we arrived in Cairo late the following evening, only to be informed that in order to join our tour of the Nile Valley, it would be necessary to leave the hotel by five o'clock the following morning.

We were air-borne when the sun came up and we had our first glimpse of that fabulous river which constitutes the life-blood of Egypt. We had been told that approximately 90% of the country's nearly 400,000 square miles was occupied by desert, but this has to be seen to be fully appreciated. From our plane the river could be seen far below as a sinuous green strip surrounded on both sides by limitless miles of undulating tawny sand (Fig. 1). This was but a small portion of the Libyan Desert, the easternmost of North Africa's great sandy wastes.

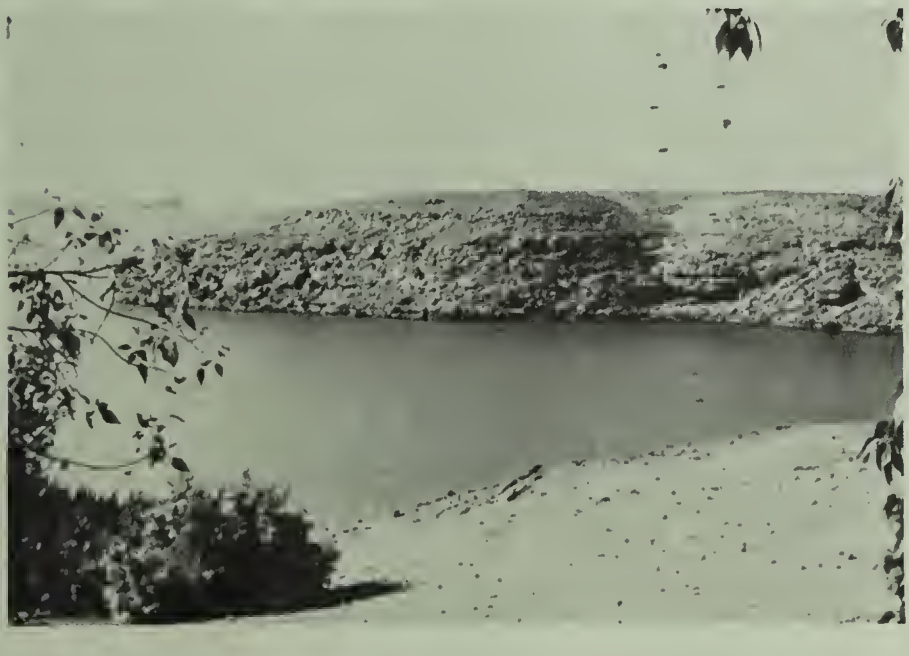

Fig. 1. The Nile at Abu Simbel

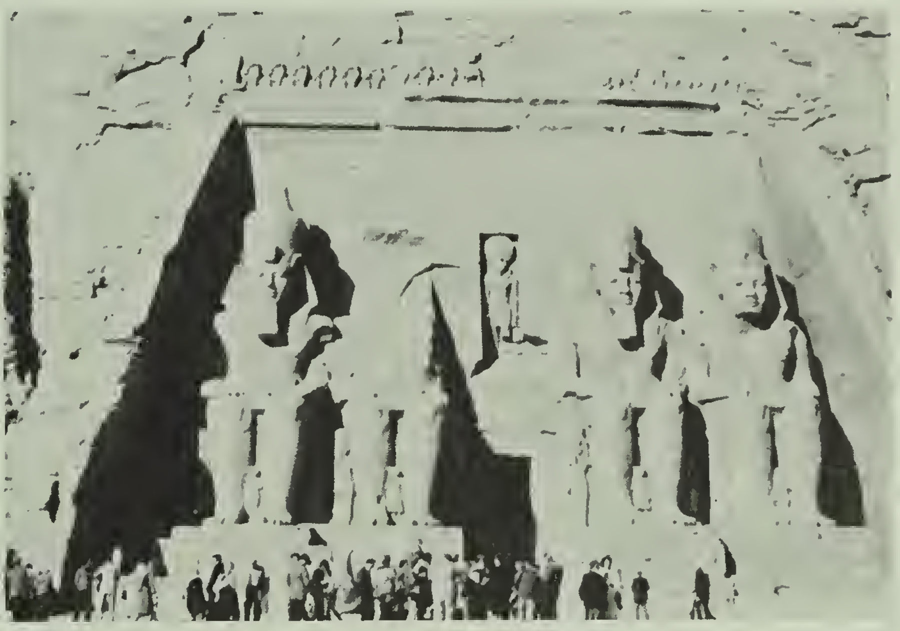

Fig. 2. The Temple of Rameses II at Abu Simbel

Our destination that day was Abu Simbel, some 750 miles due south of Cairo and close to the Sudanese border. It was here, over 3,000 years ago, that the temples and colossal statues of Rameses II and his wife Nefertary were constructed, and it was here in the 1960's that the rising waters of the Nile threatened to drown these gigantic monuments.

In what has been described as the greatest concerted archaeological effort in the history of mankind, seventeen nations contributed funds, brains and manpower to move these irreplaceable figures to a place of safety. This unprecedented feat was accomplished by cutting the statues into blocks and reassembling them farther up the slope, beyond the danger of inundation (Fig. 2). This must certainly be accounted a supreme example of engineering skill.

Fig. 3. S.S. Osiris at Aswan

The vegetation in this area was extremely scanty, consisting mainly of scattered date palms, a few acacias and several rows of planted figs. It may be of some interest to mention that the weather here was delightfully clear and balmy. We were told, however, that between May and September the heat is almost unbearable.

From Abu Simbel we flew north to Aswan, where we boarded the comfortable cruise-ship, "Osiris", which was to be our home for the next four days (Fig. 3).

Following lunch on board we were taken by motorcoach to visit the Aswan dam — or dams, for there are two in number. The first, built by the British in 1898, is over a mile long and, when completed, flooded the Nile back to the Sudanese boundary, 160 miles upstream. The second or High Dam, as it is called, is of recent construction and will further increase the irrigating potential of the river as well as supplying double the existing electric power.

It was the completion of this second dam, of course, which so raised the level of the Nile that the great monuments at Abu Simbel were threatened with destruction.

Fig. 4. Merchants at site of the Unfinished Obelisk

On the grounds surrounding the headquarters of this dam we were surprised to note a solid carpet of the tropical beach morning-glory (*Ipomaea pes-caprae*). Associated with it were poinsettia (*Euphorbia pulcherrima*) and the "sleeping" mallow (*Malvaviscus arboreus*), both from the New World, *Vinca rosea, Nerium Oleander* and at least two species of *Tamarix* — truly a cosmopolitan aggregation!

We next went to the side of an unfinished obelisk. Here, still recumbent in a quarry, is a partially worked block of granite, the completion of which was abandoned when workmen discovered faults in its structure (Fig. 4). It may be worthy of note, in passing, that granite obelisks from the Nile Valley have found their way into other parts of the world, the most famous perhaps being the one in the Place de la Concorde in Paris. In addition, there are three others in France, seven in Rome, two in Istanbul, one in London, one in New York and one in Washington, D.C.

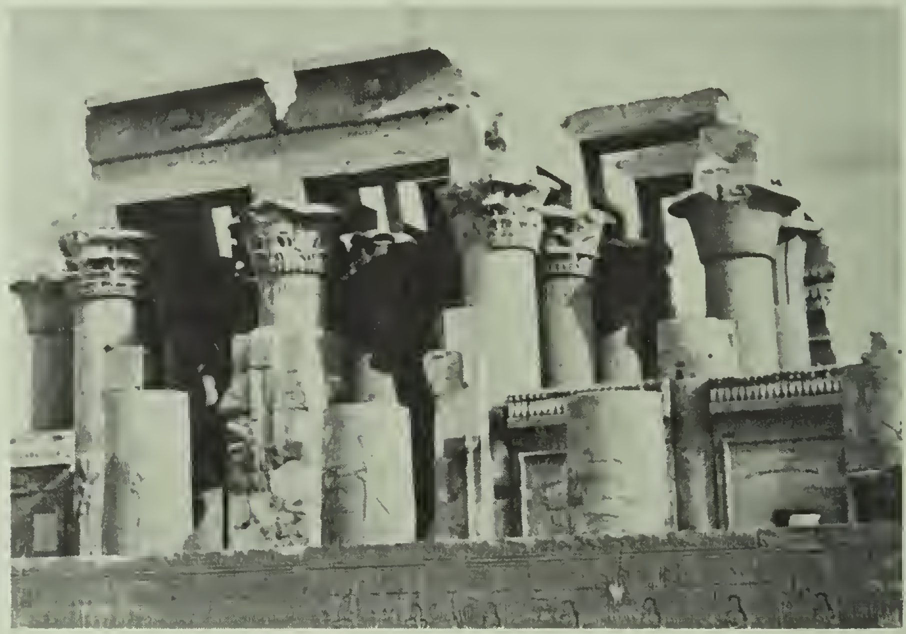

Fig. 5. The Temple of Kom Ombu

During the night our boat had moved downstream and the following morning, December 20, found us at anchor at the foot of a sandy slope on the right bank, at Kom Ombu. This is the site of a unique double temple, built about 200 B.C., dedicated in part to Sobek, the crocodile-headed god, and in part to Haroeris, the falcon-headed god (Fig. 5). On the ten minute sandy walk up to this temple only two conspicuous plants were to be seen: on one side a solid carpet of "Russian thistle" (*Salsola Kali*) and on the other a dense stand of some species of *Tamarix*. (Fig. 6).

Our next "port of call" was Edfu, where we were conducted by horse-drawn carriages to visit the Temple of Horus, which was begun by Ptolemy III in 237 B.C. This is a massive structure (Fig. 7), nearly every square inch of surface of which, both inside and out, including numerous columns, is covered with hieroglyphics.

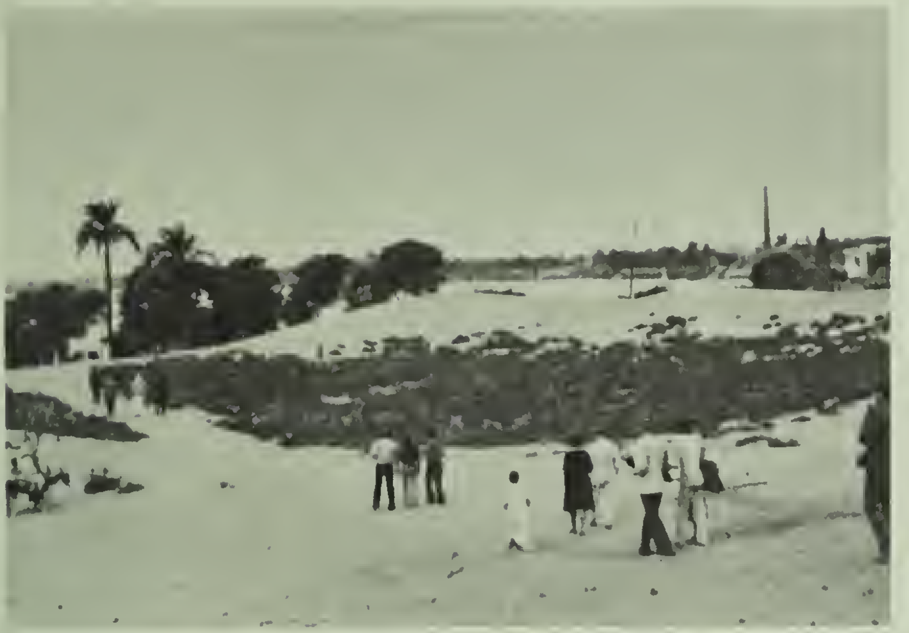

Fig. 6. Stand of "Russian thistle" at Kom Ombu

It was in this vicinity that we first noticed a plant which was to be with us during the remainder of our stay in Egypt; this was *Calotropis gigantea*, looking very much like an overgrown milkweed (*Asclepias*) to which, indeed, it is closely related. My wife and I had first seen this plant many years ago in India, where it is so ubiquitous that we had naively assumed it to be restricted to that country. Not so, however; it is also native in tropical Africa where it is valued for the yellow fibers obtained from the bark and the kapok-like floss supplied by the seeds.

Another old friend, which made its presence known at about this time, was *Tecoma stans*, that attractive small bignoniaceous tree with bright yellow flowers. Poinsettias were in full bloom here and a conspicuous tree in the country and near the Temple, was *Albizia Lebbeck*.

The following morning, having cruised several miles downstream during the night, we stopped at Esna and went ashore to visit the Temple of Esna, dedicated to the god Khnum, which was rebuilt under Ptolemy VI (Fig. 8). The approach to this temple was by way of a ten minute walk through a narrow street where we saw snake charmers, men ironing by using their feet and many shops where furniture and textiles were being manufactured.

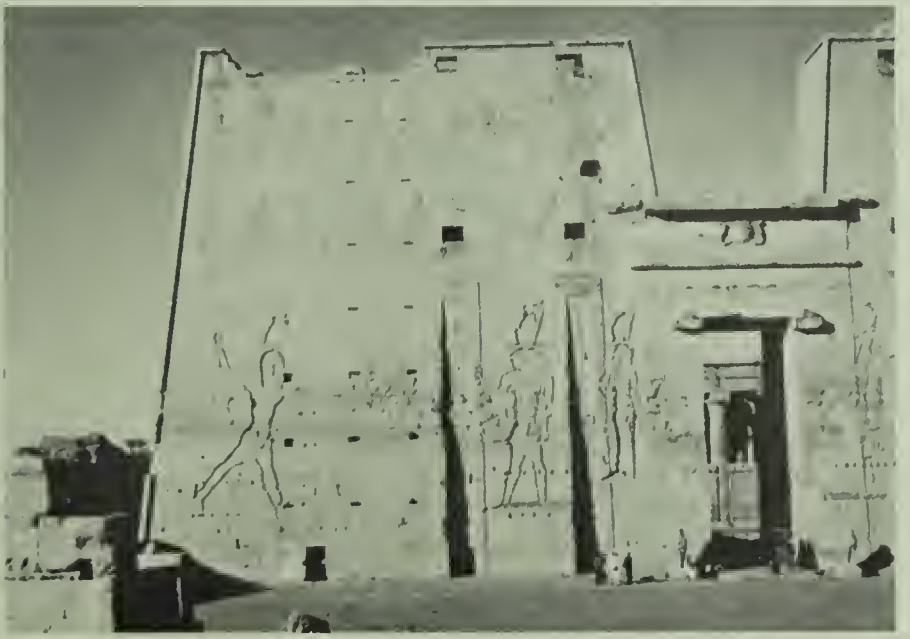

Fig. 7. The Temple of Horus at Edfu

Esna lies at one of the several barrages which cross the Nile, and following our return from the temple our ship entered a lock and was lowered five meters to the new level of the river. As we sat on deck, watching our craft descend, we were amused by seeing a train of at least a hundred camels being driven across the roadway on top of the dam. These beasts were moving faster than we had ever seen them do before and we could not refrain from wondering what was the motivating force.

Following lunch the "Osiris" pulled in along the east bank at Luxor, the old city of Thebes. This entire area is one of the richest archaeological sites in Egypt, and all we were able to do in a short time was to scratch the merest surface.

That afternoon was devoted mainly to visiting the vast Temples of Karnak and Luxor. One approaches the Temple of Karnak through the magnificent gate built by Ptolemy III. The most conspicuous features of the area are the Temple Amer-Re, the avenue of sphinxes (Fig. 9) and the Obelisk of Queen Hatshepsut cut from a single block of pink granite (Fig. 10). The Hypostyle Hall is said to be the largest temple in the world, covering as it does some 50,000 square feet.

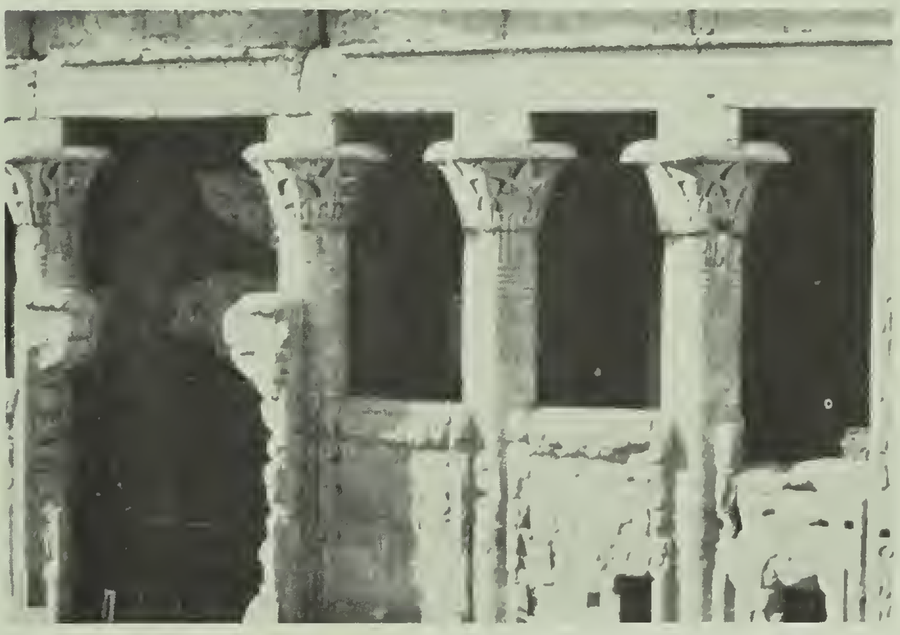

Fig. 8. The Temple of Khnum at Esna

On the opposite or west bank of the Nile is located the Valley of the Kings where the tombs of 64 pharaohs have been discovered. Here is the famous tomb of Tutankhamen (the fabulous treasures of which we were to see later in the Museum at Cairo), the tombs of Rameses VI and Sethos I and the nearby Funerary Temple of Queen Hatshepsut (Figs. 11, 12 and 13).

The last-named was of special interest to me because it was this lady (who reigned from 1515 to 1484 B.C.) who dispatched an expedition to Punt in Somaliland in search of myrrh for purposes of embalming. It is said that living specimens of this and other plants were brought back for the queen's garden, and historians often herald this as the real beginning of plant exploration on a planned basis. It certainly is one of the earliest known examples.

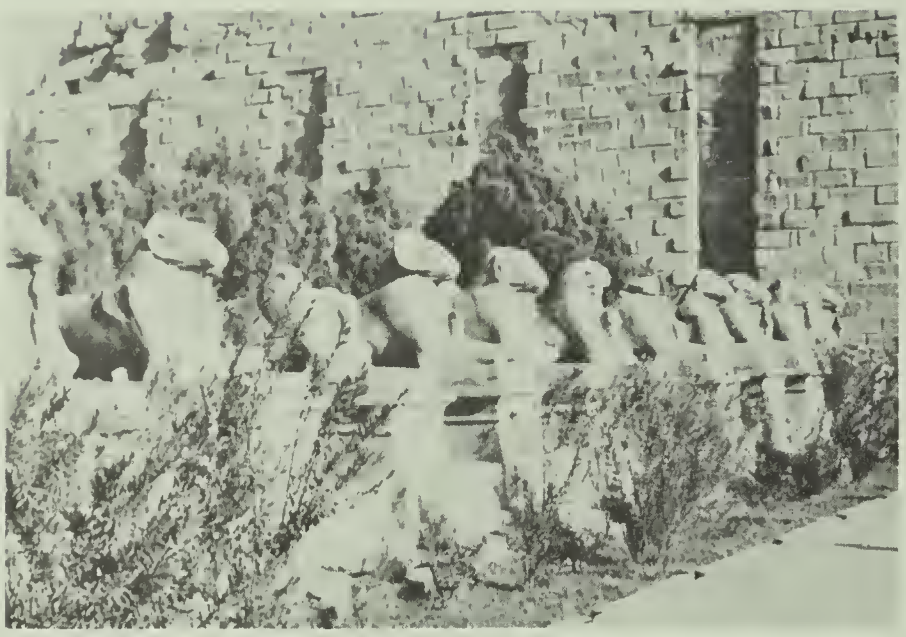

Fig. 9. Row of Sphinxes at Karnak

On December 22 we flew from Luxor to Cairo where we had reservations at the sumptuous Meridien Hotel on the right bank of the Nile. From our balcony we could not only see the pyramids of Giza, some nine miles distant, but enjoy a magnificent view across the river, the teeming city and newly constructed Cairo Tower, which is over 550 feet tall.

The following day was a highly diversified one. We went first to Memphis to behold the enormous statue of Rameses II lying on its back in a building especially constructed to protect and display it. One climbs to a balcony from any of the four sides of which he can look down on this figure, but it is impossible to photograph more than a small portion of it. The building is surrounded by a somewhat formal garden in the center of which stands an alabaster statue of a Sphinx. (Fig. 14).

Our next stop was at Sakkara, the City of the Dead. En route we stopped to photograph the Step Pyramid of King Zoser, believed to be the oldest pyramid in the world, far antedating those at Giza (Fig. 15). Near the pyramid are the remains of a colonnaded temple, believed to be one of the most ancient of its kind in existence. The hundreds of tombs are enclosed in a series of labyrinthine structures not far from the temple.

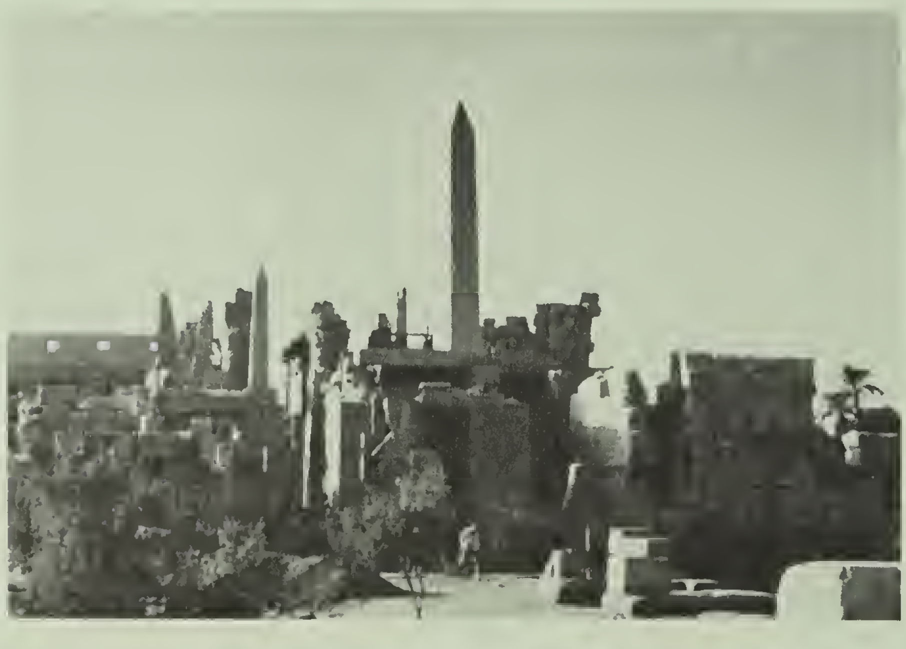

Fig. 10. General view at Karnak with obelisks

Lunch that day was in an outdoor restaurant near Sakkara. A brief list of the plants in the surrounding garden will serve to indicate the growing conditions which exist in the upper delta of the Nile. In addition to such fruits as banana, guava, mango and oranges, there were *Euphorbia tirucalli, Lantana camara, Casuarina equisetifolia, Eucalyptus globulus, Malvaviscus arboreus* and *Jasminum officinale*.

Without question the climax of any trip to Egypt is a visit to the pyramids and Sphinx at Giza, which one author has termed, "the most photographed pieces of exotica in the world." So much has been written about these superb monuments that no attempt will be made to describe our afternoon spent among them. Suffice it to say that we were as overwhelmingly impressed as must be anyone who beholds them (Fig. 16).

On the morning of December 25, the other members of our small group having departed for Athens, my wife and I went to visit the Giza-Orman Botanical Garden, where we were shown around by M. Ezz El Din, the Keeper of the Herbarium. This fine old garden, which consists of 70 acres, and was established some 70 years ago, boasts a fine collection of interesting mature trees, including an entrance avenue of royal palms. (Fig. 17).

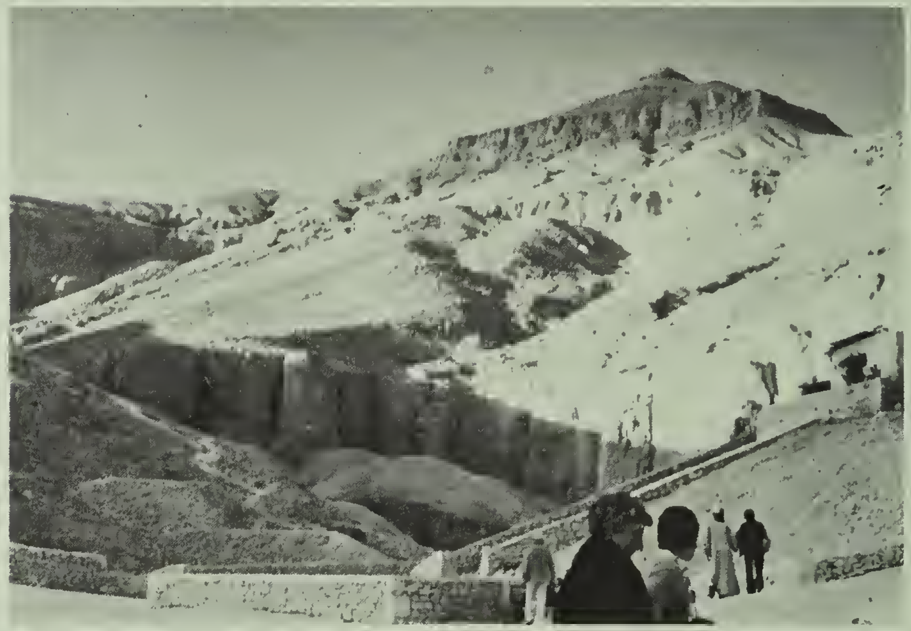

*Photo by Felicia Gonzalez*

Fig. 11. The Valley of the Kings.

As might be expected, there was very little in flower at this time of year, but poinsettia and bird-of-paradise (*Strelitzia*) were making a good show of color. Our real pleasure was derived from viewing the rich collection of trees, both coniferous and hardwood. Among the former were many species of pines, our own swamp cypress (*Taxodium distichum*), Port Orford cedar (*Chamaecyparis Lawsoniana*), *Cupressus lusitanica* and *Agathis robusta*. The latter is the famous Kauri tree from Australia. Also from that continent was an elegant specimen of the bunya-bunya pine (*Araucaria Bidwillii*).

Representing the hardwoods were such species as *Ficus nitida* and *Cedrela sinensis*. The common hedge-plant in the garden was *Dodonaea viscosa*, a member of the Sapindaceae which we had seen before in many different countries.

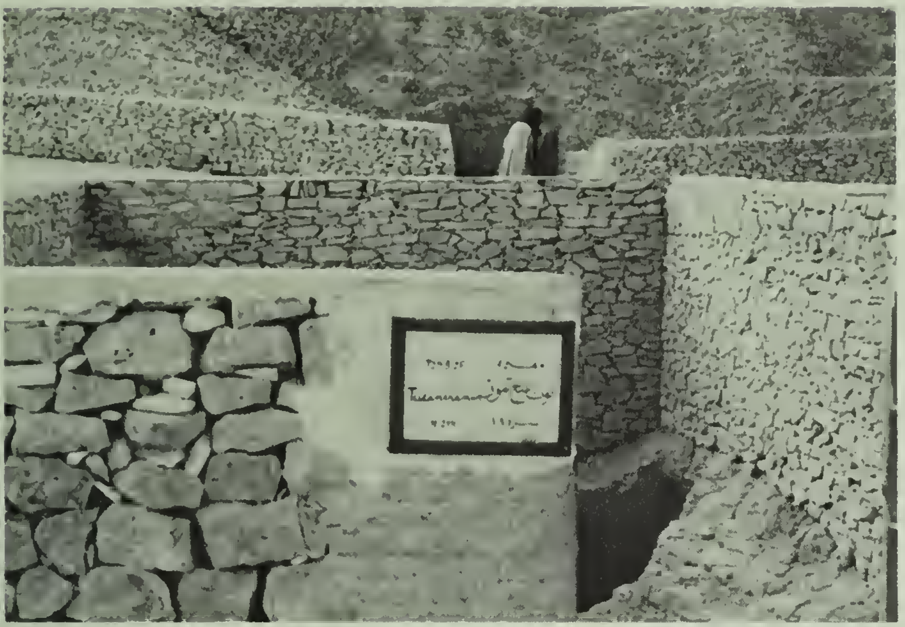
Photo by Felicia Gonzalez

Fig. 12. Entrance to the Tomb of King Tutankhamen.

We spent the following morning in the Egyptian Museum, which contains the world's most important collection of Egyptian antiquities, including the treasure discovered in the Tomb of Tutankhamen in 1922, at least that part not on tour.

Following our visit to the Museum we went to see the Muhammad Ali Mosque, with its superb minarets and alabaster walls. From the ramparts flanking this structure one has a magnificent view across the city of Cairo far below.

On Tuesday, December 27, my wife and I flew to Athens to rejoin the rest of our party who in the meantime had been sightseeing in the vicinity of the Greek capital.

In Spring of 1968 our Arboretum Tour had spent a week or so in Greece, visiting such important archaeological sites as Cape Sounion, Corinth, Mycenae, Epidauris, Olympia and Delphi. Since an account of that odyssey will be found in Number 1 of this *Newsletter*, there appears to be no need of repeating it here. One new experience, however, seems worthy of placing on record and that was our visit to the newly established Diomidus Botanical Garden at Dafni, a suburb of Athens, where we were graciously shown around by Mr. Gerd Priebe, a member of the staff. (Fig. 18).

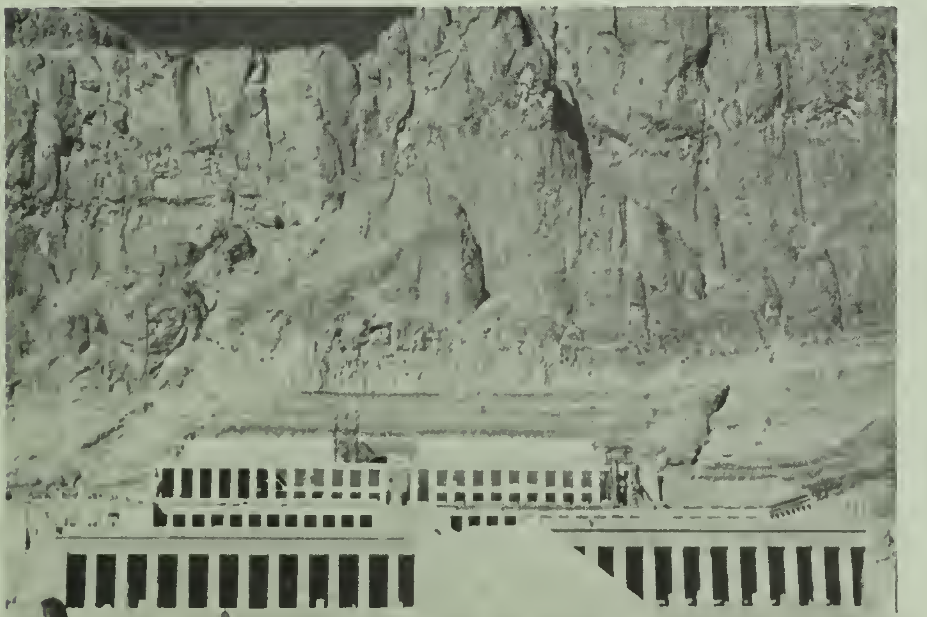
Photo by Felicia Gonzalez

Fig. 13. Funerary Temple of Queen Hatshepsut.

This garden which was opened only about a decade ago consists of over 400 acres located on an undulating slope where *Pinus halapensis* and *Cupressus sempervirens* make up a large part of the original vegetation. Mr. Priebe told us that the garden already contains over 3,000 species and varieties and although many of the plants are still rather small there is much of interest to be seen. In addition to the numerous conifers, were such hardwood species as pepper tree (*Schinus molle*), St. John's bread (*Ceratonia siliqua*) and bottle-brush tree (*Callistemon speciosum*). There were long rows of our American "century plant" (*Agave americana*) and along the newly laid-out walks and roadways such intriguing shrubs as *Hypericum balearicum, Medicago arborea, Cistus ladaniferus* and *Retama sphaerocarpa*. The last-named is a legume with rush-like stems which we had seen previously in southern Spain. Elaborate plans are in existence for the further development of this garden and we left with the feeling that, given time, it should become one of the finest institutions of its kind in southern Europe.

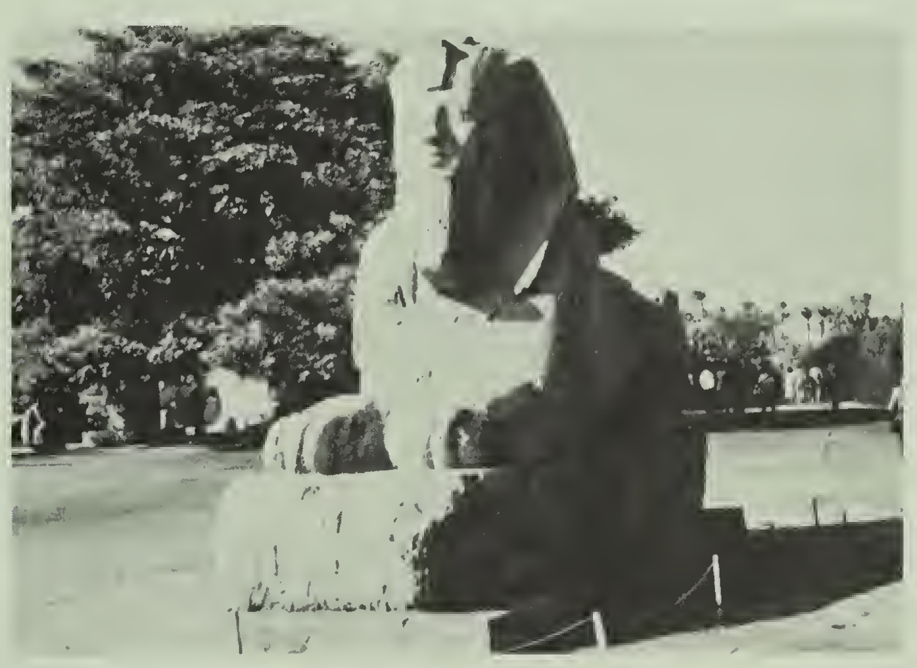
Fig. 14. Alabaster statue of Sphinx at Memphis

Late that afternoon we flew from Athens to Heraklion, the capital of Crete. This delightful elongated mountainous island was, of course, the center of the Minoan civilization which antedated and contributed so much to the culture of Greece. It boasts some of the finest scenery to be found anywhere in the Mediterranean, including numerous snow-capped peaks, and contains many archaeological sites of the foremost importance, most of them dating back 3,000 years.

Shortly after breakfast the morning following our arrival we investigated the small park directly in front of our hotel. It is planted largely with Eucalyptus and pepper tree, but interspersed among them were a yellow-flowered butterfly-bush (*Buddleia madagascariensis*) and a dark purple-flowered *Cestrum* (probably *C. purpureum*). We were all familiar with the flowers of *Pittosporum Tobira*, but not one of us recalled ever having seen it in fruit. Here the calyx had split open revealing the black raisin-like berries within.

Fig. 15. The Step Pyramid at Sakkara

In our rented mini-bus we then made off for Knossos (Cnossus), three miles distant, the most important archaeological site in Crete. Here the recontructed Palace of Minos occupies an extensive area on the shoulder of a low hill surrounded by *Pinus halapensis* (Fig. 19). Excavations of relatively recent date have revealed flights of stairs, courts, porticoes, royal chambers, baths and the throne room of what is believed to be the oldest kingdom in Europe. We were able to wander at will among these marvelous ruins, exposed and partially restored by Sir Arthur Evans, and appreciate its many colored columns and sophisticated frescoes.

After a couple of hours — all too short a time — we departed from Knossos and drove eastward along the picturesque northern coast of the island with its many bays and inlets. For the first 20 or so miles (as far as Malia) the country was largely agricultural, devoted mainly to olives and vineyards. As we continued eastward, however, the character of the terrain altered dramatically and we entered an area which perhaps can best be described as garigue. This is a type of vegetation, usually encountered on dry, stony hillsides, which represents a late stage in the degradation of original forest and which is characterized by low scattered shrubs which are often coriaceous and spiny.

St. John's bread (*Ceratonia*) in this region is greatly dwarfed (only a few feet tall) as is the mastic tree (*Pistacia Lentiscus*), a member of the Anacardiaceae with pinnately compound leaves. Associated with these normally arborescent species were numerous shrubs, such as gorse (*Ulex europaeus*), an orange-flowered "thistle" (*Carthamus*), lavender (*Lavandula* sp.) and several species of rock-rose (*Cistus*). On all sides were the tall dried-out last year's stalks of *Asphodelus microcarpus*.

If one were asked to select the most conspicuous wild flower in Crete at this time of year the answer would simply have to be a bright yellow-flowered "wood sorrel" known botanically as *Oxalis pes-caprae* (*O. cernua*). This stemless perennial has basal three-parted leaves and bears its flowers on naked scapes. Concerning it Polunin and Huxley in their very useful little volume, *The Wild Flowers of the Mediterranean*, have this to say, "This plant has become a serious weed in many Mediterranean orange groves and orchards. It is a native plant of the Cape of Good Hope and was brought to the Mediterranean at the end of the eighteenth century. It spreads very rapidly by bulbils which are produced in great numbers" (page 108).

Fig. 17. Entrance to the Giza-Orman Botanical Garden in Cairo

Fig. 16. The Pyramid of Cheops and the Sphinx at Giza

With this statement we are in hearty agreement. In orchard after orchard the plant formed a solid golden carpet, much in the manner that dandelions or hawkweed occasionally do with us.

Our destination that morning was Aghios Nikalaos (Saint Nicholas), a picturesque fishing village with white houses and narrow streets (Fig. 20). We were somewhat surprised to note that a common "weed" around the village was the tree tobacco (*Nicotiana glauca*), a tall yellow-flowered plant which is native to tropical America.

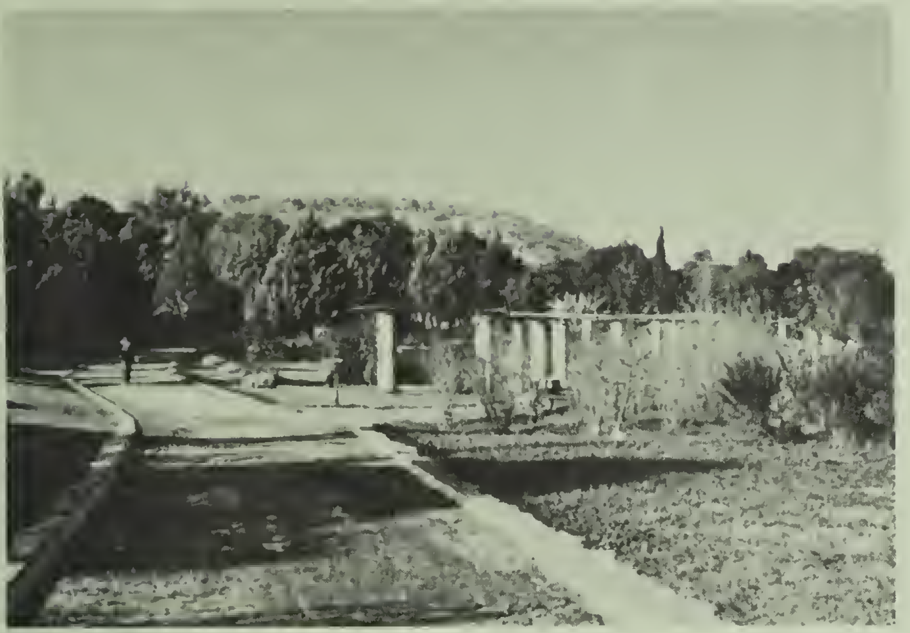

Fig. 18. A view in the Diomidus Botanical Garden near Athens

We returned to Heraklion by a different road and stopped once or twice to watch families harvesting olives. This was accomplished by spreading sheets upon the ground, then beating the trees with long poles until the fruit rained down. It seemed to us to be a rather primitive method, but we were forced to admit that it was effective. (Fig. 21). Although the fruits were black, they were still unspeakably bitter. Late that afternoon we paid a visit to the island's celebrated Archaeological Museum.

This must certainly be included in any listing of the great museums of the world. It is the repository for the priceless collections of gold ornaments, jewelry, pottery and frescoes found in Crete's numerous excavations. All of these are displayed with the utmost good taste and in a manner calculated to evoke a lively interest in one of the earliest of the world's civilizations.

The following day we drove in a southwesterly direction to Phaestos (or Festos), the site of still another Minoan palace.

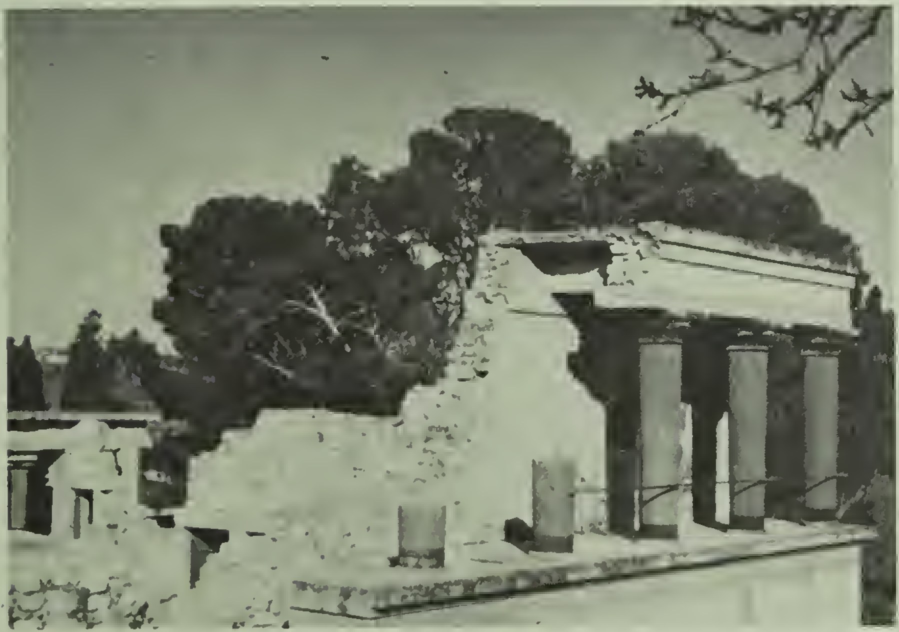

Fig. 19. Section of the Palace of Minos at Knossos

The ruins of the palace at Phaestos occupy an imposingly beautiful setting overlooking the lovely plain of Messara. They are as extensive as those at Knossos, though relatively little restored. This may please those who find Evans' reconstructions garishly over-bright, for here one exercises one's imagination to supply the columned porticoes in muter tones and to cover this maze of buildings with delicate murals (Fig. 22).

Crete is justly proud of its wines and our route that day took us through the very heart of the island's vineyards, mile after many mile of them. Later, however, we entered a more arid region where the Kermes oak (*Quercus coccifera*) and the oriental plane-tree (*Platanus orientalis*) were the dominant elements in the vegetation, both somewhat dwarfed and with very brownish leaves. (Fig. 23)

The previous day we had been puzzled by a plant with very narrow evergreen leaves which was conspicuous along the sides of the road. It was lacking flowers or fruit, so we stopped to collect it and I sent a specimen to Dr. Frederick G. Meyer of the U.S. National Arboretum in Washington, D.C. Fred has very kindly replied as follows, "It seems to be *Acacia saligna,* one of the finest Australian species. It is widely cultivated in many parts of the world".

Fig. 20. Waterfront at Ag. Nikolaos

What we had taken for leaves were therefore in reality flattened stems known as "phyllodes". This is but one of the numberous species of *Acacia* introduced into the Mediterranean and frequently escaping from cultivation.

Lunch that day was in Matola, a small village on the south coast. Across the bay from the town is a huge sandstone escarpment which is honeycombed with a multitude of caves inhabited, we were told, by international "hippies".

Following lunch we paused briefly at Aghia Triada, our third and last Minoan site. Here down a steep hillside are ruins less pretentious but more intimate than those at Knossos and Phaestos. They represent the remains of a princely home, mostly unreconstructed, where the maze of rooms lie open to the sky, and from which have been taken many of the superb examples of Minoan art now seen in the Museum at Heraklion. The slopes above this palace

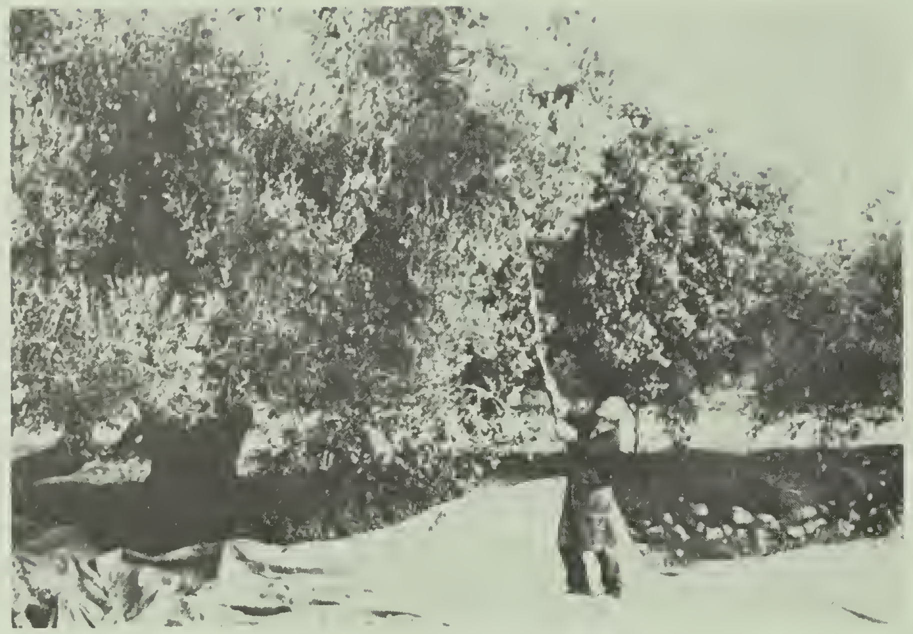

Fig. 21. Harvesting olives

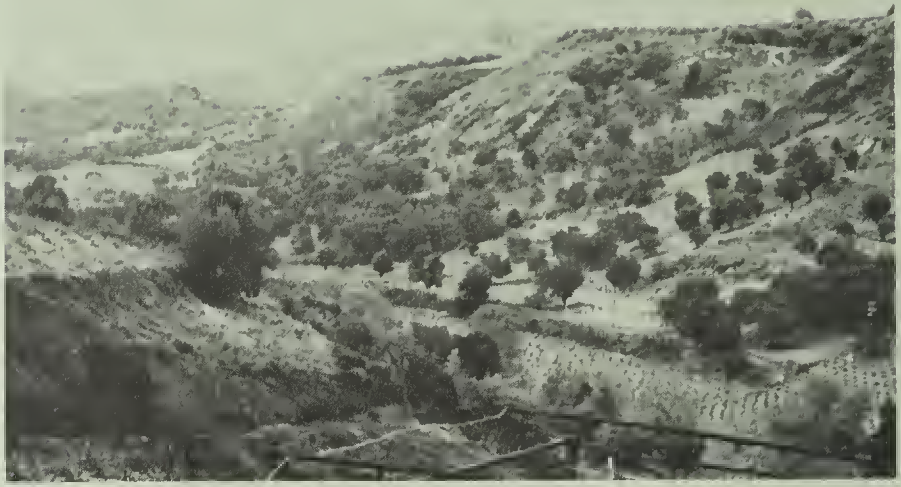

Fig. 23. Vineyards and olives south of Phaestos

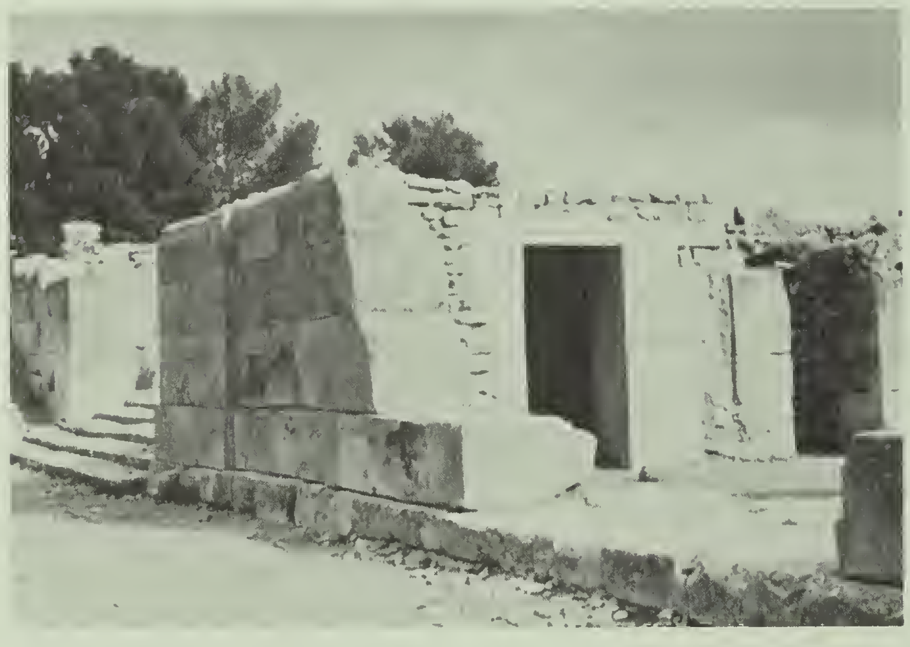

Fig. 22. View in Palace at Phaestos

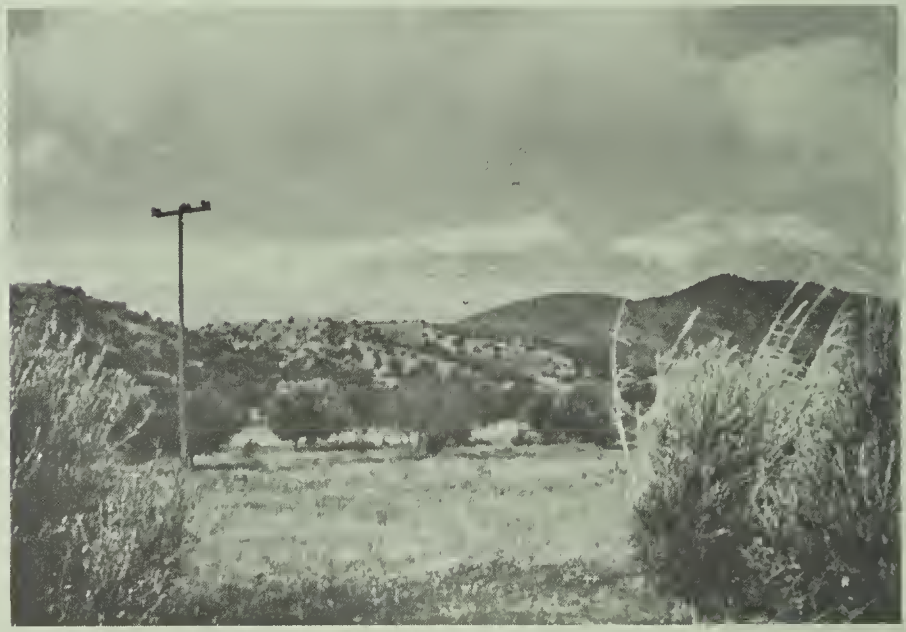

Fig. 24. The Mt. Ida Range

again presented a garigue type of vegetation, which included a pink-flowered rock-rose (*Cistus villosus*), *Thymelea hirsuta* and one of the very early flowering anemones, probably *A. hortensis,* in which the flowers vary from white to pinkish.

Mention has already been made of the mountainous nature of the island. Many of its snow-clad peaks are in the neighborhood of 8,000 feet and M. Ida, the tallest, is 8,060. This is supposedly home of the mountain cranberry (*Vaccinium Vitis-idaea*) and we wished it were possible to see and photograph it.

Our guide at Phaestos had pointed out the general location of the mountain but it was then heavily veiled in clouds. Now, as we traveled northward on our return to Heraklion, the cloud cover began to dissipate and we finally were rewarded with a marvelous view of this peak and some of the neighboring summits in the same range. (Fig. 24).

Late that evening we flew back to Athens and the following day left for home.

# WINTER DAMAGE

**ELIZABETH B. FARLEY**

The severe cold weather which we experienced during the winter of 1976-77 caused much less damage to our plant collection, even those plants considered marginally hardy, than we feared. In mid-January, for a five-day period the thermometer on the exterior of the greenhouse registered temperatures of 0°F or below (-5°F). These temperatures along with high winds later in the winter put severe stress on the plants. During the early weeks of spring, as we walked about the Arboretum to assess the damage, we felt pessimistic about the condition of many specimens when we saw much evidence of leaf desiccation. However, as spring advanced, we could see that the collection withstood the adverse climatic conditions much better than we originally thought.

This is not to say that damage did not occur. Among the broad-leaved evergreens, *Camellia*, both *sasanqua* and japonica, located in the protected area behind the residence, were hard hit. A number of plants died and those remaining had to be pruned heavily this past summer. The evergreen *Ligustrum japonicum* and *lucidum*, well-established healthy specimens between the driveway and the residence, were completely defoliated and had to be cut back to ground level. By September they had put forth vigorous new growth. The large plantings of *Sarcococca Hookeriana* 'Humilis', in the alleé between the residence and the rose garden, suffered extensive dieback on the terminal portions. The less common *S. ruscifolia*, was killed. Fortunately there was available a replacement which had been propagated from our parent plant.

*Ilex Aquifolium* and its cultivars, *I. crenata* and cultivars, particularly those located in exposed windy areas, suffered moderately heavy burn and leaf loss. During the summer we pruned out much of the dead wood and many of the damaged specimens put forth new growth. It is interesting to note that all of our plants of *I. pedunculosa* and *I. ciliospinosa* came through the winter virtually undamaged.

Among the evergreen magnolias there was a fair amount of foliage burn. Unfortunately, two of our most handsome specimens were killed — *Magnolia grandiflora* 'Praecox Fastigiata' (which came from Kingsville Nurseries in 1957) and *M. g.* 'St. Mary'. We are pleased to report that a former student was successful a few years ago in rooting two cuttings of our *M. g.* 'Praecox Fastigiata' and she has graciously offered to give one of her plants of this cultivar to the Arboretum.

The *Pyracantha* species suffered extensive dieback but by mid-summer had put forth vigorous new growth.

The decidious trees and shrubs appear not to have suffered extensive twig dieback. In a number of cases, however, flower buds were blasted. Examples that come readily to mind are *Chimonanthus praecox*, the handsome plant of winter-sweet inside the front gate, *Parrotia persica* and *Parrotiopsis Jacquemontiana*, none of which bloomed in the spring of 1977.

In the *Rhododendron* collection, a number of Azaleas suffered moderate twig dieback. This meant, of course, that spring bloom on these specimens was not as heavy as usual.

On the whole, the conifers came through the winter with little foliage burn. Two specimens of the somewhat tender *Pinus halepensis brutia* died. However, a number of well-established plants in the dwarf beds were killed: *Chamaecyparis thyoides* 'Andelyensis', *Crytomeria japonica* 'Vilmoriniania', *Taxus baccata* 'Overeynderi' and *Thuyopsis dolabrata* 'Variegata'.

A heavy snow cover provided protection for many plants during most of the period of extremely low temperatures and high winds. The benefits of this snow "blanket" were seen in the spring in the ericaceous beds. The Callunas and Ericas came through with very little damage — much less than we have had other winters of more moderate temperatures and with little or no snow cover.

A number of plants which are considered to be somewhat tender in our zone sustained little damage. Among this group, we would mention *Illicium floridanum, Trochodendron aralioides*, and *Firmiana simplex*.

**THOMAS F. MILLER**
**1904-1978**

It is with deep regret that we record the death on January 24 of Mr. Thomas Miller. Tom worked here for almost 40 years. Originally he had been Mrs. Barnes's chauffeur. During the past years he had served as a valuable member of the grounds staff.

# THE 1977 HARVEST SHOW

### GUS WIENCKE

The vast human populations of our planet draw their life from just a few families of food plants. The fascinating interaction of people and food plants since neolithic times has radically changed food plants such as *Zea mays* and in turn new food plants have altered human life through the great civilizations which cultivation of such plants made possible. This interaction of people and plants is still going on as new food plants are being developed. For example, Arboretum students were attracted to the possibility of raising some of their food even in city apartments or a bit of garden ground in an urban area. Also, between classes there was often a lively exchange of recipes and new ideas for the kitchen and table.

Our idea was to capitalize on our own interest in ways to put new or better food on the table along with the flow of facts and ideas from our Arboretum classes. We used a group process to identify personal interests and resources and so focus on a theme that could be fun to develop. A cloudy "Food from the Past for the Future" ended up finally in: "Three Families of Food Plants Between People and Starvation." The big three are the Gramineae (cereals, maize, bamboo), the Solanaceae (nightshade family with its potato, tomato, pepper, and eggplant members as well as its mood-altering or poisonous relatives, tobacco and datura), and the Leguminosae (bean, pea, and clover family). It was exciting to investigate these food plants and to look for new ways to use or even develop them for food for the future.

Gus Wiencke acted as coordinator and idea midwife in a group process which, we are pleased to say, involved almost the entire second-year class. By June three committees were organized and we even had a mock-up for the free-standing, three-pointed star-shaped staging using both sides of six large wooden screens. Gus then suddenly left the Philadelphia area for the summer but on his return the many plants, the research, Gwynne Ormsby's fine graphics, the recipes, the new foods to sample all came together and, under Dottie Grosse's direction, were beautifully staged. Over four thousand samples of sprouted alfalfa were handed out and dozens of people copied the novel recipes which we posted with our food plants. So we had a grand interaction between exhibit and people. And we received two blue ribbons—the Education Award and an Award of Merit.

Debbie Dulkerian shepherded the grasses and found that growing wheat in flower pots wasn't so simple. However, her committee put together a beautiful harmony of graceful yellow, green, and brown feathery stalks against gold burlap. Here's her report:

Gramineae are probably the most widely used food family and yet the least known. The reason for this is that most grass products come to us in a processed form such as flour or in cereals and bread. We planned in this section of the exhibit to show living plants at their mature size and flowering. And we were lucky to have nice specimens to choose from: *Zea mays* (Indian corn), *Triticum aestivum* (wheat), *Secale cereale* (rye), *Pseudosasa* (*Arundinaria*) *japonica* (bamboo), and a seven-foot *Sorghum bicolor* (*vulgare*) (sorghum or kafir corn). A new grain plant impressed us most. It is *Tritical*, a successful, nutritional hybrid cross between wheat and rye.

Along with live plants we were fortunate to have a nice display of many other seeds including *Hordeum vulgare* (rye) and *Oryza sativa* (rice). An ornamental member of the family is pampas grass which we showed in a dried arrangement.

In keeping with the other two sections, we posted a recipe. It was for Coconut Wheat Sprout Cookies, accompanied by a jar of wheat sprouts to use. You toast sprouts in the oven, grind in a blender, and combine with honey, oil, rolled oats, nuts, and milk and bake on a cookie sheet.

THREE PLANT FAMILIES
ARBORETUM OF THE BARNES FOUNDATION THE BIG THREE FAMILIES OF FOOD PLANTS

Around the corner were the colorful Solanaceae, set off against green and red burlap. They ranged from the harmless *Petunia* to the dangerous *Datura*. Claudie Brock coordinated the display to show Solanaceae in leaf, flower, and fruit along with a bright basket spilling over with tomatoes, potatoes, peppers, eggplant, and economically significant products from ketchup to cigars and vodka.

Gus Wiencke scoured Bucks county in search of *Datura Stramonium* (Jimson weed) and finally fetched a lush, evil-smelling specimen from northern Roxborough. The plant with its spiny green fruit was housed in a white wire cage, symbolic of its danger to people and farm animals. Early settlers in Virginia found that its abundant black seeds were as good as a bottle of gin. Enthused, they ate so much that they turned raving mad for a space of eleven days. Ever since this mysterious alien has been called Jimson weed, possibly because of British pronunciation of Jamestown where it was first sampled.

Quoting from Claudie Brock's report, we sorted out our summer's research and used interesting bits of information about Solanaceae on two panels forming the background for the display. Examples of living plants showed both the edible fruit as well as ornamental flowers. Hourly spraying barely kept the sprawling eggplant with its glossy fruit fresh. Plants we displayed included *Datura Stramonium* (Jimson weed), *Lycopersicon (Lycopersicum) esculentum* (wolf-peach or tomato), *Capsicum annuum* (pepper), *Nicotiana* (in the tobacco group), *Physalis* (ground cherry), *Atropa Belladonna* (deadly nightshade), *Solanum Melongena* (eggplant), *Petunia, Browalia* and *Nierembergia* (ornamental flowers).

Our recipes included Gerry's Favorite Chili Sauce, Tomato and Pepper Relish, and Poor Man's Caviar. The latter is boiled and chopped eggplant combined with tomato, onion, garlic, sugar, salt, and pepper, then vinegar and oil. Delicious spread on toast or French bread.

There for the eating was the third side of the exhibit and it attracted lots of nibblers. It was the Leguminosae which was dominated by *Glycine Max*, soybean plants from early green to twisted brown ready to harvest.

Lou Lord, the coordinator, had passed out bags of alfalfa seed and class members came back with more than enough sprouts to fill a bushel. The exhibit's keynote was a quote from Dr. Louise Stanley: "Changing food habits, introducing new food, is never easy. But now two important motives supplement our efforts—the drive for good nutrition and the shortage of efficient protein, both of which the soya bean products can supply at relatively low cost." Informational material included a definition of legume, its properties of being high in protein and nitrogen-giving to the soil, some history of the soybean and its fantastic yield per acre and per labor unit as compared with beef, and its nutritive values. A recipe for Soybean Chili had beside it paper and pencil for those interested in copying.

Labeled living plants added interest and included *Arachis hypogaea* (peanut), *Glycine Max* (soybean), blooming crown vetch, and sprays of *Sophora japonica* (Japanese scholar tree) to soften the background.

Highlight was giving out samples of alfalfa sprouts in small paper cups. Three pounds of seeds served four thousand and started many conversations. We gave directions for sprouting and showed day-by-day stages in glass jars. Other sproutable legumes were on view. So the Barnes display ended up with food to munch on as well as food for thought.

# NOTES FROM THE ARBORETUM

### THE STAFF

Mrs. Farley represented the Arboretum at regional meetings of the American Association of Botanical Gardens and Arboreta on October 2 at the Brookside Gardens, Wheaton, Maryland, and on November 17 at the Brooklyn Botanic Garden. She was a speaker at a fern propagation program presented before The Delaware Valley Fern Society on November 6.

Bruce Keyser spoke on propagation before the Princeton Chapter of the American Rhododendron Society and has also given several talks before garden clubs on garden design.

Mrs. Hopkins has just returned from a month in Italy where she was setting up two tours for 1979. Her trips this summer will take her into all areas of Scotland. She has given a number of lectures this past fall and winter on "Design for the Small Garden", "The Perennial Bed", "Trees and Shrubs for Year Round Beauty", and "English Gardens".

Mr. Langran served as Landscape Architect for the design of the Knowlton Substation of the Philadelphia Electric Company. At the 150th annual meeting of the Pennsylvania Horticultural Society this firm received one of the 1977 Landscape Horticulture Awards of the Greater Philadelphia Chamber of Commerce in co-operation with the Pennsylvania Horticultural Society.

Dr. List and his sister, Ilka List, have co-authored *A Walk in the Forest: The Woodlands of North America* (T. Crowell, 1977) which has received fine reviews. He is tentatively planning to write a new book on plant ecology and finds that the experience in teaching this subject at Barnes is proving invaluable.

In May and June, 1977, Dr. Penny continued his survey of the Pascagoula River Valley in Jackson County, Mississippi, in connection with environmental impact studies being made in the vicinity of electrical generating plants.

Maureen Pratt gave a lecture on "House Plants" before the Pine Ridge Garden Club, Wallingford on September 14.

Dr. Fogg was the speaker at the Philadelphia Chapter of the American Cactus and Succulent Society on November 13; his topic was "Our North American Deserts". On December 15 he gave an illustrated lecture to the Philadelphia Botanical Club on "Mexico Revisited." On March 10 Dr. Fogg received the Silver Medal for 1977 of the Massachusetts Horticultural Society.

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*Vascular Plants of British Columbia*. Roy L. Taylor and Bruce MacBryde. Univ. of B.C. Press, Vancouver, B.C. 1977.

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